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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/557,288

02/27/2006

Mario Tavazza

2520-1068

1741

466 7590 08/18/2009

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EXAMINER

ZHENG, LI

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

08/18/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/557,288	<b>Applicant(s)</b> TAVAZZA ET AL.	
	<b>Examiner</b> LI ZHENG	<b>Art Unit</b> 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 44-55,58,59,61,63-65,68 and 69 is/are pending in the application.
- 4a) Of the above claim(s) 44-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 55,58,59,61,63-65,68 and 69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 44-55, 58-59, 61, 63-65 and 68-69 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 11, 2009 has been entered.

Applicant's amendments to claims 53-55, 61, 63-65 and 68 as well as submission of new claim 69 filed on 6/11/09 are acknowledged.

Claims 44-54 are withdrawn for being drawn to non-elected inventions.

Claims 55, 58-59, 61, 63-65 and 68-69 are examined on the merits.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The rejections and objections that are not recited in this Office Action are considered as being withdrawn.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 55, 58-59, 61, 63-65 and 68-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 55, the recitation "an amino acid sequence capable of conferring resistance" renders the claims indefinite. It is unclear what the recitation encompasses due to the recitation "capable of". The metes and bounds are not clear. It is suggested to delete the recitation "capable of".

Claim 55 recites the limitation "the corresponding viral gene sequence" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Further, it is unclear what is considered to be geminivirus-derived sequence. How much sequence homology is required to be considered as a geminivirus-derived sequence?

***Scope of Enablement***

Art Unit: 1638

6. Claims 55, 58-59, 61, 63-65 and 68 remain rejected and claim 69 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method for the preparation of transgenic plant having long lasting resistance against geminiviruses by making silent mutations to truncated Rep gene from TYLCSV, does not reasonably provide enablement for making any mutations to truncated Rep gene from TYLCSV having 130 residues from N-terminal of the Rep protein, or any geminivirus-derived sequence encoding an amino acid sequence able to confer resistance against geminiviruses. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims, for the reasons of record stated in the Office action mailed September 22, 2008. Applicants traverse in the paper filed December 22, 2008. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue claim 55 is amended to limit the mutation to be silent mutation distributed along selected geminivirus gene-derived mutations (response, page 9, 2nd paragraph).

The Office contends that Applicants' amends to claim 55 is confusing. While limiting the mutation to be silent one, the amendment further contains a limitation that "a polynucleotide sequence encoding a mutagenised geminivirus-derived amino acid" in part iii) and iv) of part c), which cause the confusion because being a silent mutation means no amino acid sequence being changed.

Art Unit: 1638

Applicants further argue that partial resistance has been found in transgenic plants transformed with geminivirus derived sequence encoding AC1/C1/AL1, BC1/BV1 as well as CP(response, the paragraph bridging pages 10-11).

However, except for AC1/C1/AL1 gene, neither the specification nor the prior art provides guidance on whether the virus induced gene silencing affects the resistance produced by expressing BC1/BV1 or CP as described in the prior art, particular Duan et al. and Kunik et al. Therefore, it is unlikely that the instant method as claimed would provide long last resistance for plants expressing BC1/BV1 or CP genes.

### ***Summary***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Zheng whose telephone number is 571-272-8031.

The examiner can normally be reached on Monday through Friday 9:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1638

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Li Zheng/

Examiner, Art Unit 1638